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IN THE CLAIMS:

Please cancel claim 6, as follows:

1. (Previously Amended) A method of adjusting the intensity of light in an optical spectroscopy system from a light source that emits light having an expected average wavelength spectrum to maintain the reliability of a light signal from said light source, said method comprising the steps of:

modulating a first said light signal by an optical filter configured to weight the intensity of said first light signal by wavelength according to a regression vector that identifies a difference between said average spectrum and a wavelength spectrum of said first light signal from said light source;

comparing the intensity of said modulated first light signal to an intensity expected if said wavelength spectrum of said first light signal equaled said average spectrum; and

adjusting a power input to said light source responsively to said comparing step to a degree so that a subsequent said light signal defines a wavelength spectrum that is closer to said average spectrum, as measured by said modulating and comparing steps, than said wavelength spectrum of said first light signal.

2. (Previously Amended) The method as in claim 1, including collimating said first light signal prior to said modulating step.

3. (Previously Amended) The method as in claim 2, including bandpass filtering said first light signal prior to said modulating step to a wavelength range that at least includes an operative wavelength range of said optical filter.

4. (Previously Amended) For a light source in an optical spectroscopy system, a method of compensating for a change in a light signal, said method comprising the steps of:

providing a light source that outputs a light signal having a wavelength spectrum;

identifying a relationship between intensity of said light signal and a difference between said wavelength spectrum and an expected wavelength spectrum of said light source;

detecting intensity of said light signal output by said light source; and

based on said relationship and said intensity from said detecting step, modifying said wavelength spectrum in compensation for a change in said wavelength spectrum of said light signal.

5. (Previously Amended) The method as in claim 4, wherein said identifying step includes defining a regression vector that identifies a difference between an expected average wavelength spectrum of said light source and said wavelength spectrum of said light signal, and wherein said detecting and modifying steps include

prior to detecting intensity of a first said light signal, modulating said first light signal by an optical filter configured to weight the intensity of said first light signal by wavelength according to said regression vector;

comparing the intensity of said modulated first light signal to an intensity expected if said wavelength spectrum of first light signal equaled said average spectrum; and

adjusting a power input to said light source responsively to said comparing step to a degree so that a subsequent said light signal defines a wavelength spectrum that is closer to said average spectrum, as measured by said modulating and comparing steps, than said wavelength spectrum of said first light signal.

6. (Canceled)

7. (Previously Added) The method as in claim 4, wherein said light signal is non-monochromatic.

8. (Previously Added) For a light source in an optical spectroscopy system, a method of compensating for change in a light signal, said method comprising the steps of:

applying a light signal from a light source to a measurement sample, wherein the entire wavelength range of said light signal applied to said measurement sample is simultaneously applied to said measurement sample;

modulating said light signal by an optical filter configured to weight the intensity of said light signal by wavelength according to a predetermined function that identifies a difference between an expected spectrum of said light signal and an actual spectrum of said light signal;

defining a relationship between change in spectral shape in said wavelength range determined at said modulating step and change in input power to said light source; and

based on said relationship, relating a change in said spectral shape to a modification in said input power and so modifying said input power in compensation for said change in said spectral shape.